



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/676,706

09/29/2000

S. Babar Raza

0325.00409

1556

21363

7590

09/22/2004

CHRISTOPHER P. MAIORANA, P.C.

24840 HARPER

ST. CLAIR SHORES, MI 48080

EXAMINER

ODLAND, DAVID E

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,706

Applicant(s)

RAZA ET AL.

Examiner

David Odland

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/29/2000</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figure 1 lacks a "Prior Art" label. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 1 of the specification the number(s) of the corresponding related Patent(s) and/or Applications(s) have been left blank. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 10-15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanders et al. (USPN 6,115,379) hereafter referred to as Flanders, in view of Cisneros et al. (USPN 5,166,926), hereafter referred to as Cisneros.

Referring to claims 1, 12 and 13, Flanders discloses an apparatus configured to extract in-band information or skip extraction said in-band information (logic circuits of a router inspect the cast type field of packets to determine if they are unicast or multicast and if they are multicast a port mask is extracted and used to performing the multicast, otherwise the port mask is not extracted and a unicast operation is performed (see abstract and figure 3)), wherein said apparatus is configured to switch between said extraction and skipping said extraction (the logic circuit of the router switch between performing multicasting (extracting the port mask) and unicasting (not extracting the port mask)).

Flanders does not disclose that the logic circuit also performs a look-ahead operation. However, Cisneros discloses a system where a look-ahead operation is performed when reading cell headers in an ATM router (see column 9 lines 2-53). It would have been obvious to one skilled in the art at the time of the invention to implement this feature into the Flanders system because as Cisneros points out in, column 9 lines 45-47, the look-ahead operation significantly relaxes time constraints of the system.

Referring to claims 2 and 14, Flanders discloses switching from generating one or more unicast queue generating one or more multicast queue addresses (the switch changes between transmitting unicast and multicast packets thus inherently the corresponding memory addresses for the packet must be generated (see figure 2 and abstract)).

Referring to claims 3 and 15, Flanders discloses switching from generating one or more multicast queue addresses to generating one or more unicast queue addresses (the switch changes between transmitting unicast and multicast packets thus inherently the corresponding memory addresses for the packet must be generated (see figure 2 and abstract)).

Art Unit: 2662

Referring to claims 10 and 17, Flanders discloses that the in-band information comprises unicast information (the switch changes between transmitting unicast and multicast packets and when it is a unicast packet a transmit port number is obtained (see figure 2 and abstract))

Referring to claims 11 and 18, Flanders discloses that the in- band information comprises multicast information (the switch changes between transmitting unicast and multicast packets and when it is a multicast packet the switch obtains the port mask which is related to the multicast packet (see figure 2 and abstract)).

5. Claims 4-9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanders in view of Cisneros and further in view of Byrn et al. (USPN 5,502,833), hereafter referred to as Byrn.

Referring to claims 4,8 and 9, Flanders does not disclose pointer to address generator logic circuit; head pointer logic circuit; and multicast head pointer logic circuit used to generate and store multicast addresses. However, Bryn discloses a system the uses head pointers and a pointer to address generator logic circuitry (see figure 3). It would have been obvious to one skilled in the art at the time of the invention to implement this feature into Flanders because the use of pointer make a system more flexible and adaptable in storing data in buffers.

Referring to claims 5 and 6, although Flanders does disclose unicast addressing, Flanders does not disclose that the head pointer logic circuit is used to store and generate unicast addresses. However, Byrn discloses using head pointer logic to address locations in memory to store data (see figure 3). It would have been obvious to one skilled in the art at the time of the

Art Unit: 2662

invention to implement this feature into Flanders because using memory that uses pointer would make the system more flexible and adaptable.

Referring to claims 7 and 16, Flanders does not disclose that the head pointer logic circuit is configured as a pipeline stage. However, It would have been obvious to one skilled in the art at the time of the invention to implement this feature into Flanders because pipelining allows operations to be simultaneously, therefore implementing it in Flanders would make the system operate faster.

Conclusion

6. The following prior art, which is made of record and not relied upon, is considered pertinent to applicant's disclosure:

- a. U.S. Patent Number 6515991 to McKeown.
- b. U.S. Patent Number 6131123 to Hurst et al.
- c. U.S. Patent Number 6163810 to Bhagavath et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland whose telephone number is (571) 272-3096. The examiner can normally be reached on Monday - Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 2662

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

deo

September 16, 2004

A handwritten signature in black ink, appearing to read 'JPezzo', is positioned above the printed name.

JOHN PEZZLO
PRIMARY EXAMINER